

Montana Board of Oil and Gas Conservation Environmental Assessment

Operator: TAQA North USA, Inc.
Well Name/Number: State of Montana OG-38170-07 36-9
Location: SE SE Section 36 T37N R55E
County: Sheridan, MT; Field (or Wildcat) Wildcat

Air Quality

(possible concerns)

Long drilling time: No, 20-30 days drilling time.

Unusually deep drilling (high horsepower rig): Heavy duty double derrick drilling rig to drill a Red River/ Winnipegosis formation vertical well, 10,745' MD/10,745' TVD.

Possible H2S gas production: Slight possibility of H2S.

In/near Class I air quality area: No Class I air quality area nearby.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

Air quality permit (AQB review)

Gas plants/pipelines available for sour gas

Special equipment/procedures requirements

Other: _____

Comments: No concerns.

Water Quality

(possible concerns)

Salt/oil based mud: Main hole will be drilled with dillstillate 882 based drilling fluids (oil based invert mud system. Surface casing hole will be drilled with a freshwater and freshwater mud system.

High water table: Possible high water table.

Surface drainage leads to live water: Yes, an unnamed ephemeral drainage is located 0.14 miles to the north this location. This drainage leads to a large pond. There

Water well contamination: None, closest water wells in the area are more than 1 mile in any direction from this location. Surface hole will be drilled with freshwater and freshwater drilling muds. The surface casing setting depth of 1500' should be below all freshwater zones.

Porous/permeable soils: No, sandy gravelly clay soils.

Class I stream drainage: No, Class I stream drainages.

Mitigation:

Lined reserve pit

Adequate surface casing

Berms/dykes, re-routed drainage

Closed mud system

Off-site disposal of **solids**/liquids (in approved facility)

Other: Freshwater drilling fluids will be land applied with surface owner approval.

Comments: 1500' surface casing well below freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: None anticipated.

High erosion potential: Small fill of 6.6' and moderate cut of 10.7' required.

Loss of soil productivity: None, location to be restored after drilling well, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, large well site 340'X350'.

Damage to improvements: Slight.

Conflict with existing land use/values: Slight

Mitigation

- Avoid improvements (topographic tolerance)
- Exception location requested
- Stockpile topsoil
- Stream Crossing Permit (other agency review)
- Reclaim unused part of wellsite if productive
- Special construction methods to enhance reclamation
- Other _____

Comments: Access will use existing county road and a road will be constructed into this location, about 2068' from the county road. Surface hole (freshwater) cuttings will be mixed buried on site. Oil based invert mud cuttings will be trucked to an approved waste disposal facility. Oil based drilling fluids will be recycled to the next location or returned to the mud company's recycling facility. Freshwater surface fluids will be land applied. Freshwater based cuttings will be mixed off onsite. No concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Residences are, about 1 mile to the northwest from this location.

Possibility of H2S: Yes, slight.

Size of rig/length of drilling time: Heavy double drilling rig 20 to 30 days drilling time.

Mitigation:

- Proper BOP equipment
- Topographic sound barriers
- H2S contingency and/or evacuation plan
- Special equipment/procedures requirements
- Other: _____

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Only species identified as threatened or endangered are the Whooping Crane and Piping Plover. Species of concern is the Sprague's Pipit. NH tracker website lists two (2) species of concern. They are as follows: The Black Tern and Whooping Crane. State of Montana surface lands. There may be possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. State of Montana "Trust Lands" minerals and surface. Trust Lands will do surface EA.

Mitigation:

- Avoidance (topographic tolerance/exception)
 - Other agency review (DFWP, federal agencies, DSL)
 - Screening/fencing of pits, drillsite
 - Other: _____
- Comments: State of Montana surface lands. There may be possible

historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. State of Montana "Trust Lands" minerals and surface. Trust Lands will do surface EA. No concerns.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites: None identified.

Mitigation

avoidance (topographic tolerance, location exception)

other agency review (SHPO, DSL, federal agencies)

Other: _____

Comments: State of Montana surface lands. There may be possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. State of Montana "Trust Lands" minerals and surface. Trust Lands will do surface EA. _____

Social/Economic

(possible concerns)

Substantial effect on tax base

Create demand for new governmental services

Population increase or relocation

Comments: No concerns. Wildcat well.

Remarks or Special Concerns for this site

Wildcat Red River/ Winnipegosis formation vertical well, 10,745'MD/10,745'TVD,

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur, but can be mitigated in a short time.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/ John Gizicki

(title:) Compliance Specialist

Date: September 17, 2014

Other Persons Contacted:

Montana Bureau of Mines and Geology, Groundwater Information Center website.

(Name and Agency)

Sheridan County water wells

(subject discussed)

September 17, 2014

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA
COUNTIES, Sheridan County

(subject discussed)

September 17, 2014

(date)

Montana Natural Heritage Program Website (FWP)

(Name and Agency)

Heritage State Rank= S1, S2, S3, T37N R56E

(subject discussed)

September 17, 2014

(date)

Montana Cadastral Website

(Name and Agency)

Surface Ownership and surface use Section 36 T37N R55E

(subject discussed)

September 17, 2014

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____